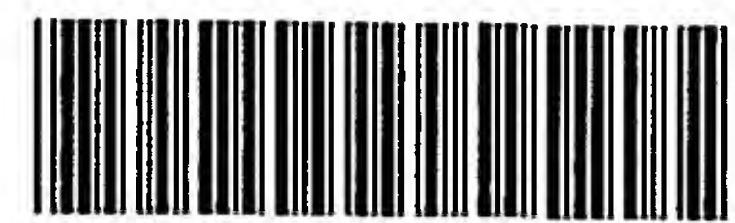


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The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/588, 445
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PATENT APPLICATION: US/10/588,445

DATE: 08/17/2006

TIME: 15:22:17

Input Set : A:\00952-04,Herr-Paint Seq. Listing.U.S.ST25.txt
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3 <110> APPLICANT: University of Virginia Patent Foundation
 4 Gilmer, Linda
 5 Mandal, Arabinda
 6 Wolkowicz, Michael
 7 Klotz, Kenneth
 8 Herr, John
 10 <120> TITLE OF INVENTION: Compositions and Methods for Identifying and Isolation Sperm
 for
 11 Forensic Applications
 13 <130> FILE REFERENCE: 00952-04
 C--> 15 <140> CURRENT APPLICATION NUMBER: US/10/588,445
 C--> 15 <141> CURRENT FILING DATE: 2006-08-04
 15 <150> PRIOR APPLICATION NUMBER: 60/542,499
 16 <151> PRIOR FILING DATE: 2004-02-06
 18 <150> PRIOR APPLICATION NUMBER: PCT/US2005/003910
 19 <151> PRIOR FILING DATE: 2005-02-07
 21 <150> PRIOR APPLICATION NUMBER: 60/581,945
 22 <151> PRIOR FILING DATE: 2004-06-22
 24 <160> NUMBER OF SEQ ID NOS: 6
 26 <170> SOFTWARE: PatentIn version 3.3
 28 <210> SEQ ID NO: 1
 29 <211> LENGTH: 285
 30 <212> TYPE: PRT
 31 <213> ORGANISM: Homo sapiens
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 40 20 25 30
 43 Gln Thr Ser Val Gln Gln Leu Pro Gly Glu Phe Phe Ser Leu Glu Asn
 44 35 40 45
 47 Pro Ser Asp Ala Glu Ala Leu Tyr Glu Thr Ser Ser Gly Leu Asn Thr
 48 50 55 60
 51 Leu Ser Glu His Gly Ser Ser Glu His Gly Ser Ser Lys His Thr Val
 52 65 70 75 80
 55 Ala Glu His Thr Ser Gly Glu His Ala Glu Ser Glu His Ala Ser Gly
 56 85 90 95
 59 Glu Pro Ala Ala Thr Glu His Ala Glu Gly Glu His Thr Val Gly Glu
 60 100 105 110
 63 Gln Pro Ser Gly Glu Gln Pro Ser Gly Glu His Leu Ser Gly Glu Gln
 64 115 120 125
 67 Pro Leu Ser Glu Leu Glu Ser Gly Glu Gln Pro Ser Asp Glu Gln Pro
 68 130 135 140
 71 Ser Gly Glu His Gly Ser Gly Glu Gln Pro Ser Gly Glu Gln Ala Ser

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PATENT APPLICATION: US/10/588,445

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80           180           185           190
83 Gln Ala Ser Gly Ala Pro Ile Ser Ser Thr Ser Thr Gly Thr Ile Leu
84           195           200           205
87 Asn Cys Tyr Thr Cys Ala Tyr Met Asn Asp Gln Gly Lys Cys Leu Arg
88           210           215           220
91 Gly Glu Gly Thr Cys Ile Thr Gln Asn Ser Gln Gln Cys Met Leu Lys
92 225           230           235           240
95 Lys Ile Phe Glu Gly Lys Leu Gln Phe Met Val Gln Gly Cys Glu
96           245           250           255
99 Asn Met Cys Pro Ser Met Asn Leu Phe Ser His Gly Thr Arg Met Gln
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122 Ile Asn Gln Phe Ala Ala Ala Tyr Phe Gln Glu Leu Thr Met Tyr Arg
123          35          40          45
126 Gly Asn Thr Thr Met Asp Ile Lys Asp Leu Val Lys Gln Phe His Gln
127          50          55          60
130 Ile Lys Val Glu Lys Trp Ser Glu Gly Thr Thr Pro Gln Lys Lys Leu
131 65          70          75          80
134 Glu Cys Leu Lys Glu Pro Gly Lys Thr Ser Val Glu Ser Lys Val Pro
135          85          90          95
138 Thr Gln Met Glu Lys Ser Thr Asp Thr Asp Glu Asp Asn Val Thr Arg
139          100         105         110
142 Thr Glu Tyr Ser Asp Lys Thr Thr Gln Phe Pro Ser Val Tyr Ala Val
143          115         120         125
146 Pro Gly Thr Glu Gln Thr Glu Ala Val Gly Leu Ser Ser Lys Pro
147          130         135         140
150 Ala Thr Pro Lys Thr Thr Pro Pro Ser Ser Pro Pro Pro Thr Ala
151 145          150          155          160
154 Val Ser Pro Glu Phe Ala Tyr Val Pro Ala Asp Pro Ala Gln Leu Ala
155          165          170          175
158 Ala Gln Met Leu Gly Lys Val Ser Ser Ile His Ser Asp Gln Ser Asp
159          180          185          190
162 Val Leu Met Val Asp Val Ala Thr Ser Met Pro Val Val Ile Lys Glu
163          195          200          205
166 Val Pro Ser Ser Glu Ala Ala Glu Asp Val Met Val Ala Ala Pro Leu

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PATENT APPLICATION: US/10/588,445

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TIME: 15:22:18

Input Set : A:\00952-04,Herr-Paint Seq. Listing.U.S.ST25.txt
Output Set: N:\CRF4\08172006\J588445.raw

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171	225	230	235 240
174	Val His Val Asp Leu Gly Ser Gln Pro	Lys Glu Asn Glu Ala	Glu Pro
175	245	250	255
178	Ser Thr Ala Ser Ser Val Pro Leu Gln Asp	Glu Gln Glu Pro	Pro Ala
179	260	265	270
182	Tyr Asp Gln Ala Pro Glu Val Thr	Leu Gln Ala Asp	Ile Glu Val Met
183	275	280	285
186	Ser Thr Val His Ile Ser Ser Val Tyr Asn Asp	Val Pro Val	Thr Glu
187	290	295	300
190	Gly Val Val Tyr Ile Glu Gln Leu Pro Glu	Gln Ile Val Ile	Pro Phe
191	305	310	315 320
194	Thr Asp Gln Val Ala Cys Leu Lys Glu Asn	Glu Gln Ser Lys	Glu Asn
195	325	330	335
198	Glu Gln Ser Pro Arg Val Ser Pro Lys	Ser Val Val Glu	Lys Thr Thr
199	340	345	350
202	Ser Gly Met Ser Lys Lys Ser Val Glu Ser	Val Lys Leu Ala	Gln Leu
203	355	360	365
206	Glu Glu Asn Ala Lys Tyr Ser Ser Val Tyr	Met Glu Ala Glu Ala	Thr
207	370	375	380
210	Ala Leu Leu Ser Asp Thr Ser Leu Lys Gly	Gln Pro Glu Val	Pro Ala
211	385	390	395 400
214	Gln Leu Leu Asp Ala Glu Gly Ala Ile	Lys Ile Gly Ser Glu	Lys Ser
215	405	410	415
218	Leu His Leu Glu Val Glu Val Thr Ser	Ile Val Ser Asp Asn	Thr Gly
219	420	425	430
222	Gln Glu Glu Ser Gly Glu Asn Ser Val Pro	Gln Glu Met Glu	Gly Arg
223	435	440	445
226	Pro Val Leu Ser Gly Glu Ala Ala Glu	Ala Val His Ser	Gly Thr Ser
227	450	455	460
230	Val Lys Ser Ser Gly Pro Phe Pro	Pro Ala Pro Glu	Gly Leu Thr
231	465	470	475 480
234	Ala Pro Glu Ile Glu Pro Glu Gly Glu	Ser Thr Ala Glu	Gly Leu Met
235	485	490	495
238	Lys Pro Ala Met Ala Thr Ser Glu Arg	Gly Gln Pro Pro	Pro Cys Ser
239	500	505	510
242	Asn Met Trp Thr Leu Tyr Cys Leu Thr	Asp Lys Asn Gln	Gln Gly His
243	515	520	525
246	Pro Ser Pro Pro Ala Pro Gly Pro Phe	Pro Gln Ala Thr	Leu Tyr
247	530	535	540
250	Leu Pro Asn Pro Lys Asp Pro Gln Phe	Gln Gln His Pro	Pro Lys Val
251	545	550	555 560
254	Thr Phe Pro Thr Tyr Val Met Gly Asp	Thr Lys Lys Thr	Ser Ala Pro
255	565	570	575
258	Pro Phe Ile Leu Val Gly Ser Asn Val	Gln Glu Ala Gln	Gly Trp Lys
259	580	585	590
262	Pro Leu Pro Gly His Ala Val Val	Ser Gln Ser Asp	Val Leu Arg Tyr
263	595	600	605

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/588,445

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Input Set : A:\00952-04,Herr-Paint Seq. Listing.U.S.ST25.txt
Output Set: N:\CRF4\08172006\J588445.raw

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270 Lys His Thr Leu Ser Pro Gln Asn Ala Asn Pro Pro Ser Gly Gln Asp
271      625          630          635          640
274 Val Pro Arg Pro Lys Ser Pro Val Phe Leu Ser Val Ala Phe Pro Val
275          645          650          655
278 Glu Asp Val Ala Lys Lys Ser Ser Asp Ser Gly Asp Lys Cys Ala Pro
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291 <211> LENGTH: 350
292 <212> TYPE: PRT
293 <213> ORGANISM: Homo sapiens
295 <400> SEQUENCE: 3
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301 Val Pro Ala Tyr Pro Ser Ile Thr Val Thr Pro Asp Glu Glu Gln Asn
302          20          25          30
305 Leu Asn His Tyr Ile Gln Val Leu Glu Asn Leu Val Arg Ser Val Pro
306          35          40          45
309 Ser Gly Glu Pro Gly Arg Glu Lys Lys Ser Asn Ser Pro Lys His Val
310          50          55          60
313 Tyr Ser Ile Ala Ser Lys Gly Ser Lys Phe Lys Glu Leu Val Thr His
314          65          70          75          80
317 Gly Asp Ala Ser Thr Glu Asn Asp Val Leu Thr Asn Pro Ile Ser Glu
318          85          90          95
321 Glu Thr Thr Phe Pro Thr Gly Gly Phe Thr Pro Glu Ile Gly Lys
322          100         105         110
325 Lys Lys His Thr Glu Ser Thr Pro Phe Trp Ser Ile Lys Pro Asn Asn
326          115         120         125
329 Val Ser Ile Val Leu His Ala Glu Glu Pro Tyr Ile Glu Asn Glu Glu
330          130         135         140
333 Pro Glu Pro Glu Pro Glu Pro Ala Ala Lys Gln Thr Glu Ala Pro Arg
334          145         150         155         160
337 Met Leu Pro Val Val Thr Glu Ser Ser Thr Ser Pro Tyr Val Thr Ser
338          165         170         175
341 Tyr Lys Ser Pro Val Thr Thr Leu Asp Lys Ser Thr Gly Ile Glu Ile
342          180         185         190
345 Tyr Thr Glu Ser Glu Asp Val Pro Gln Leu Ser Gly Glu Thr Ala Ile
346          195         200         205
349 Glu Lys Pro Glu Glu Phe Gly Lys His Pro Glu Ser Trp Asn Asn Asp
350          210         215         220
353 Asp Ile Leu Lys Lys Ile Leu Asp Ile Asn Ser Gln Val Gln Gln Ala
354          225         230         235         240
357 Leu Leu Ser Asp Thr Ser Asn Pro Ala Tyr Arg Glu Asp Ile Glu Ala
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PATENT APPLICATION: US/10/588,445

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Input Set : A:\00952-04,Herr-Paint Seq. Listing.U.S.ST25.txt
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361 Ser Lys Asp His Leu Lys Pro Ser Leu Ala Leu Ala Ala Ala Glu
362 260 265 270
365 His Lys Leu Lys Thr Met Tyr Lys Ser Gln Leu Leu Pro Val Gly Arg
366 275 280 285
369 Thr Ser Asn Lys Ile Asp Asp Ile Val Thr Val Ile Asn Met Leu Cys
370 290 295 300
373 Asn Ser Arg Ser Lys Leu Tyr Glu Tyr Leu Asp Ile Lys Cys Val Pro
374 305 310 315 320
377 Pro Glu Met Arg Glu Lys Ala Ala Thr Val Phe Asn Thr Leu Lys Asn
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387 <212> TYPE: PRT
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400 Thr Ala Ala Val Gln Asp Ala Gly Leu Ala His Glu Gly Glu Gly Glu
401 35 40 45
404 Glu Glu Thr Glu Asn Asn Asp Ser Glu Thr Ala Glu Asn Tyr Ala Pro
405 50 55 60
408 Pro Glu Thr Glu Asp Val Ser Asn Arg Asn Val Val Lys Glu Val Glu
409 65 70 75 80
412 Phe Gly Met Cys Thr Val Thr Cys Gly Ile Gly Val Arg Glu Val Ile
413 85 90 95
416 Leu Thr Asn Gly Cys Pro Gly Gly Glu Ser Lys Cys Val Val Arg Val
417 100 105 110
420 Glu Glu Cys Arg Gly Pro Thr Asp Cys Gly Trp Gly Lys Pro Ile Ser
421 115 120 125
424 Glu Ser Leu Glu Ser Val Arg Leu Ala Cys Ile His Thr Ser Pro Leu
425 130 135 140
428 Asn Arg Phe Lys Tyr Met Trp Lys Leu Leu Arg Gln Asp Gln Gln Ser
429 145 150 155 160
432 Ile Ile Leu Val Asn Asp Ser Ala Ile Leu Glu Val Arg Lys Glu Ser
433 165 170 175
436 His Pro Leu Ala Phe Glu Cys Asp Thr Leu Asp Asn Asn Glu Ile Val
437 180 185 190
440 Ala Thr Ile Lys Phe Thr Val Tyr Thr Ser Ser Glu Leu Gln Met Arg
441 195 200 205
444 Arg Ser Ser Leu Pro Ala Thr Asp Ala Ala Leu Ile Phe Val Leu Thr
445 210 215 220
448 Ile Gly Val Ile Ile Cys Val Phe Ile Ile Phe Leu Leu Ile Phe Ile
449 225 230 235 240
452 Ile Ile Asn Trp Ala Ala Val Lys Ala Phe Trp Gly Ala Lys Ala Ser
453 245 250 255

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/588,445

DATE: 08/17/2006

TIME: 15:22:19

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L:15 M:271 C: Current Filing Date differs, Replaced Current Filing Date